



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/516,556	02/29/2000	Mitsugu Takaki	F-6464	9936

7590

11/29/2001

Jordan and Hamburg
122 East 42nd Street
New York, NY 10168

EXAMINER

MARTIN, ANGELA J

ART UNIT

PAPER NUMBER

1745

DATE MAILED: 11/29/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/516,556

Applicant(s)

Takaki et al.

Examiner
Angela J. Martin

Art Unit
1745



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on Oct 16, 2001

2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle* 35 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 1-26 is/are pending in the applica

4a) Of the above, claim(s) 1-9 and 17 is/are withdrawn from considera

5) ☐ Claim(s) is/are allowed.

6) ☒ Claim(s) 10-16 and 18-26 is/are rejected.

7) ☐ Claim(s) is/are objected to.

8) ☐ Claims are subject to restriction and/or election requirem

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a) ☒ All b) ☐ Some* c) ☐ None of:

1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. .
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s).
- 18) ☐ Interview Summary (PTO-413) Paper No(s).
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other:

Art Unit: 1745

DETAILED ACTION

Election/Restriction

1. Applicant's election of Species II, claims 10-16, in Paper No. 5 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).
2. Claims 1-9 and 17 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b) as being drawn to a non-elected Species I and III. Election was made **without** traverse in Paper No. 5.

Claim Rejections - 35 U.S.C. § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 10-16 and 18-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 10-16 and 18-26, the phrases "both sides", "top wall", "bottom wall", "top ends" renders the claims indefinite because it is unclear which "sides" the Applicant is

Art Unit: 1745

referring to since there are four sides to each cell, and which wall or end would be considered "top" and "bottom". Appropriate correction is required.

Claim Rejections - 35 U.S.C. § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dinkler et al., U.S. Pat. No. 3,745,048.

Rejection of claim 10 drawn to a battery:

The instant claim is drawn to an integrated sealed secondary battery.

Dinkler et al., teach an integrated sealed battery (col. 3, lines 1-4) comprising a plurality of cells arranged in a row within rectangular tubular cases having a bottom, with their upper ends being sealed (col. 2, lines 1-14); first cooling medium passages formed on sides of the row of cells (col. 2, lines 16-21; Fig. 2); second cooling medium passages formed between the cases of the cells that communicate with the first passages (col. 2, lines 64-65; Fig. 2); ribs (projection strips) provided in the first passages (col. 2, lines 18-21); and escape apertures formed between the wall of the cooling medium passages and ends of the strips (col. 2, lines 39-46).

Art Unit: 1745

Dinkler et al., do not teach projection strips provided in the first cooling medium passages such as to alternately extend downwards from a wall and upwards from a wall so that the first cooling passages meander upwards and downwards.

However, the invention as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made because although the projection strips, or “ribs” of Dinkler et al., do not alternately extend upwards and downwards, Dinkler et al., provide a battery wherein there is an “evenly distributed flow of the coolant through all of the passageways...uniform cooling of all of the cells can be achieved.” The ribs perform the same function as the projection strips of the instant claims because the ribs form passageways between the cells (col. 2, lines 16-21).

Allowable Subject Matter

7. Claims 11-16 and 18-26 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.
8. Claims 11-16 and 18-26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
9. The following is a statement of reasons for the indication of allowable subject matter:

Art Unit: 1745

The Applicant claims an integrated sealed secondary battery comprising a plurality of cells arranged in a row within rectangular tubular cases having a bottom, with their upper ends being sealed; first cooling medium passages formed on sides of the row of cells; second cooling medium passages formed between the cases of the cells that communicate with the first passages; projection strips provided in the first cooling medium passages such as to alternately extend downwards from a wall and upwards from a wall so that the first cooling passages meander upwards and downwards; and escape apertures formed between the wall of the cooling medium passages and ends of the strips that extend downwards from the wall of the cooling medium passages wherein inclined faces are formed on the walls of the cooling medium passages. Additionally, Applicant recites the claim limitations of height positions of the flow-alignment strips; vertical width of the apertures; flow path cross-sectional areas; width of second cooling medium passages; thickness of the wall of passages; distance between projection strips; cross-sectional area of connecting ports; distance from the inlet or outlet orifice to the first cooling passages.

The prior art of record does not teach projection strips provided in the first cooling medium passages such as to alternately extend downwards from a wall and upwards from a wall so that the first cooling passages meander upwards and downwards; wherein inclined faces are formed on the walls of the cooling medium passages. Additionally, the prior art does not disclose the claim limitations of height positions of the flow-alignment strips; vertical width of the apertures; flow path cross-sectional areas; width of second cooling medium passages; thickness of

Art Unit: 1745

the wall of passages; distance between projection strips; cross-sectional area of connecting ports; distance from the inlet or outlet orifice to the first cooling passages.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Grivel et al., U.S. Pat. No. 5,641,589, teach a storage cell battery having a cooling device that uses a circulating fluid.

Examiner Correspondence

11. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Angela J. Martin whose telephone number is (703) 305-0586. The Examiner can normally be reached on Monday - Friday from 8:00am to 4:00pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's Supervisor, Gabrielle Brouillette, can be reached at (703) 308-0756.

In order to transmit an unofficial fax, the number is (703) 306-3186. In order to transmit an official fax/non-final, the number is (703) 872-9310. In order to transmit an official fax/after final, the number is (703) 872-9311.

Application/Control Number: 09/516,556

Page 7

Art Unit: 1745

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0661.

AJM



GABRIELLE BROUILLETTE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700